Growth of spiny lobsters based upon tagging

Numbers of recaptures by tagging program

Program	Years	Recaptures	Complete
DNR	1978-1979	3372	3132
DRG	1998	47	32
EL	1967-1969	69	30
FWC Adult Monitoring	2003	330	330
UF	1975-1977	3026	2934
		6844	6458

Spiny lobster recaptures that grew :	1085	17%
Spiny lobsters that did not grow:	5373	83%
Total:	6458	

Lobster grow by molting (discontinuous) and can be thought of as two processes: intermolt period and change in size

Intermolt period

$$P = \frac{e^{(1.233 - 1.458\,Season + 0.538\,Sex - 0.0643\,CL + 0.0696\,Days\_free)}}{(1 + e^{(1.233 - 1.458\,Season + 0.538\,Sex - 0.0643\,CL + 0.0696\,Days\_free)})}$$

Change in size

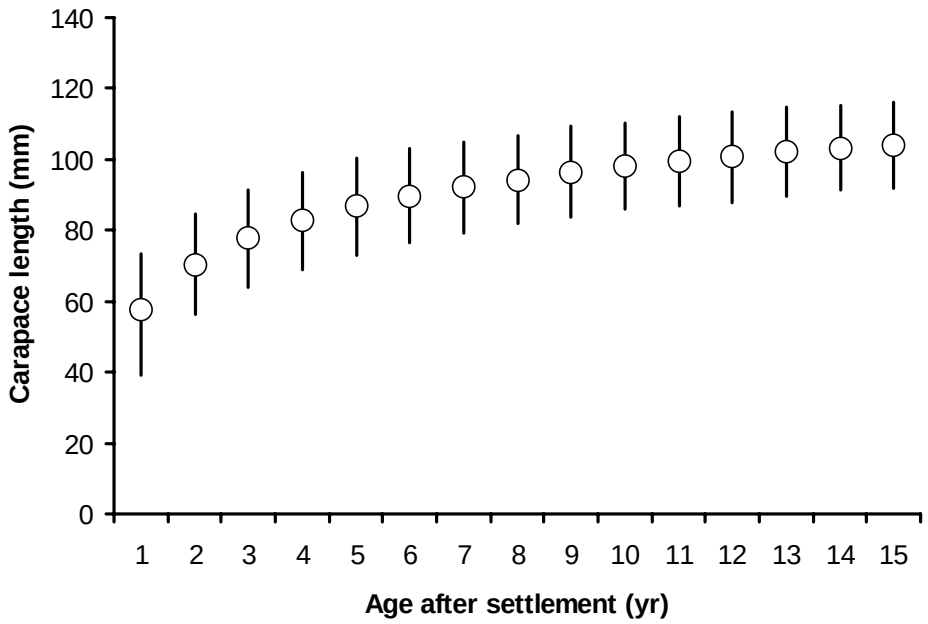
$$\Delta CL = e^{(2.009 - 0.263\,Season + 0.133\,Sex - 0.00644\,CL + 0.00407\,Days\_free + 0.0674)}$$

Neither area (Upper vs Lower keys) nor bay (Atlantic vs Gulf) were significant.

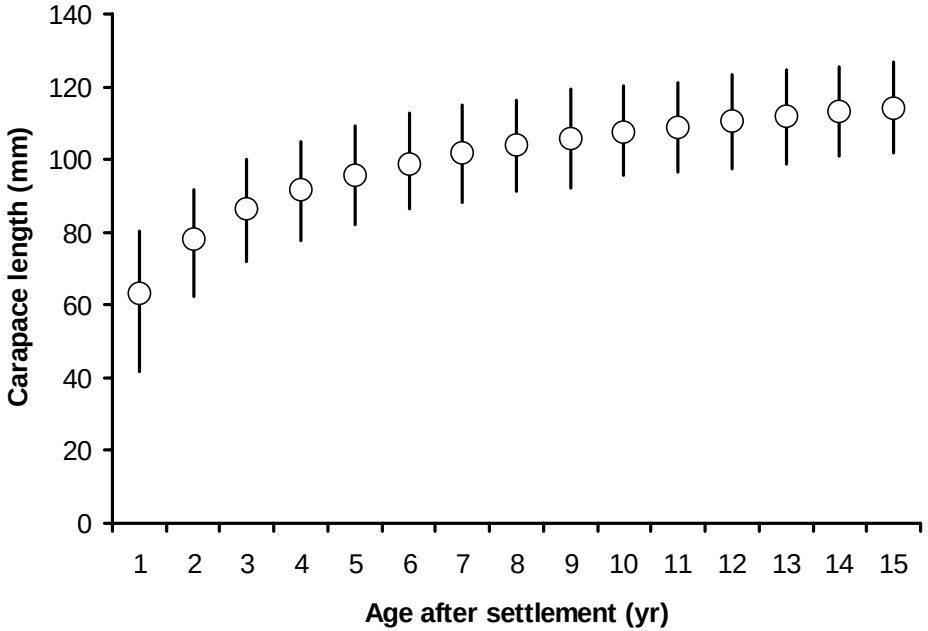
Females

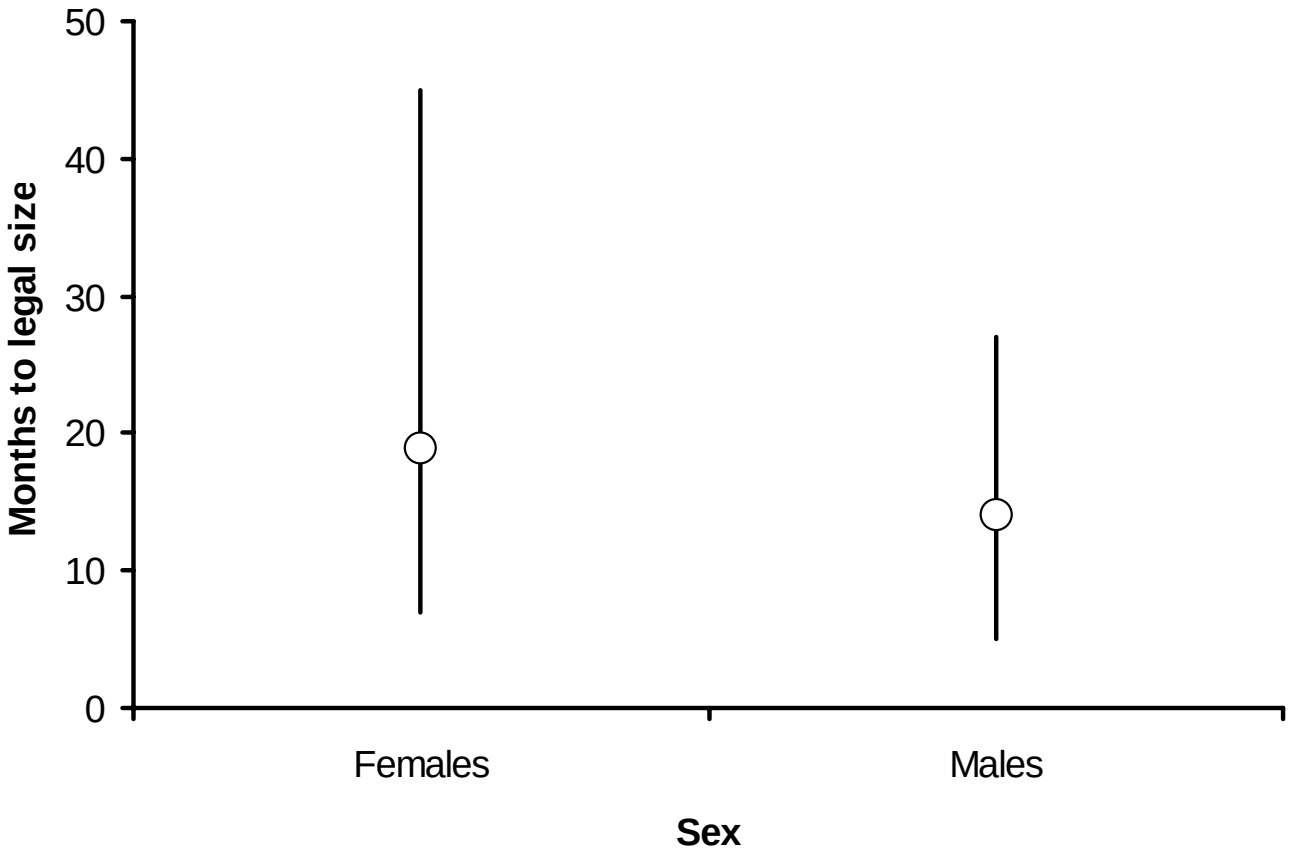
Simulated growth of spiny lobsters without any mortality.

1000 growth trajectories



Males





Age upon reaching legal size (76.2 mm or 3 inches).